

REMARKS

Claims 1-8 were originally filed. Claims 9-17 were added in the February 11, 2004 response. New Claims 18-36 are presented in this response. Claims 1-17 stand rejected in the July 23rd, 2007 Office Action. Applicants respectfully request reconsideration and withdrawal of rejection in view of the following remarks.

The claimed invention is directed to a method of manufacture of a flavor or fragrance material encapsulated in a matrix and methods for making the same. The present inventors surprisingly discovered that a matrix of carefully selected materials at correct levels provides unexpected advantageous properties such as protecting the encapsulated material at an elevated temperature.

It is an object of the claimed invention to provide method for manufacture of a flavor and fragrance system in an encapsulated form that are stable at elevated temperatures and/or dissolve slowly in aqueous environments. (*See*, Specification, page 2, lines 1-5) For example, in a flavor application, the flavor can be encapsulated in the matrix and not released until the matrix is compromised. (*See*, Specification, page 6, lines 14-18) Also, in a fragrance application such as laundry detergent powder or tablet, the fragrance will have a delayed release. (*See*, Specification, page 6, lines 21-24)

Applicants are presenting new claims 18-36 for examination. Support for new method claims can be found throughout the specification, specifically at p.2 1st paragraph:

In a second embodiment of the invention the above composition is prepared by a process that comprises the following steps of mixing the components together, optionally with a liquid plasticizer, and providing a heating source such as an extruder to obtain a melted matrix and then creating the desired particle size by forming, cooling, and sizing operations.

p. 3 2nd paragraph

When the encapsulate is lipophilic, the encapsulate is dispersed in the amorphous matrix of the final product usually with the aid of an emulsifier added to the lipophilic phase or in the matrix mixture. In contrast, when the matrix is hydrophilic, or water soluble, the final product contains the encapsulate as a dissolved solute and or as a dispersed encapsulate. It is preferred that the elements of the invention are thoroughly heated and most preferably melted in order to form the matrix. However, the present invention may still be carried out if all of the elements are not melted. The final structure of the matrix, i.e., whether the matrix is crystalline or amorphous, will depend on the materials contained in the matrix as well as how the elements were admixed and melted.

and at Page 5, 4th paragraph:

The manufacture of the encapsulation materials of the present invention can be thought of comprising three process steps of: forming, cooling and sizing.

The forming process involves the admixture of the components and heating of the mixture. It is preferable to have the contents melted in order to have a uniform mixture and consistency of product. The flavor or fragrance may then be added to the mixture either before or during the heating process and then admixed to provide consistency.

The mixture containing the flavor or fragrance is then cooled using any appropriate means of convective, conductive, or evaporative heat removal. The cooled material is then sized using conventional processes such as chopping or grinding of the material. Size classification can be done to remove fines or oversized particles. In a preferred embodiment, the sizing of the particles is done by an extrusion process in which a strip or rod-like material is formed followed by a cutting or chopping process.

The Examiner has rejected Claims 1-17 under 35 U.S.C. 102(b) as being anticipated by Johnson et al (US 6479082) or El-Nokaly (US 5599555) for the reasons set forth in the last office action.

The Examiner states that Applicant's arguments filed May 7, 2007 have been fully considered but are not persuasive. The Examiner states that Johnson et al teach the claimed components in the amounts claimed in the composition, stating the flavor is essentially "encapsulated" by the other components and Applicant does not claim a process or the process of encapsulation.

The Examiner further alleges that El-Nokaly anticipates the claimed invention by teaching an encapsulated flavor/fragrance comprising a flavor/fragrance, hydroxypropyl cellulose, and an additional component including for example fats, silica, starch, and emulsifiers in the amounts claimed. (*See*, Office Action, page 3, lines 20-24) Applicants respectfully disagree.

The Examiner states that Applicant compared the preparation temperature of El-Nokaly to the final stability temperature of the claimed invention. The Examiner alleges the preparation temperature is not the same as the final stability, however Applicant argues that the liquid crystals disclosed within El-Nokaly would not remain the one phase liquid crystal of hydroxypropyl cellulose. The one phase liquid crystal would dissolve when heated to elevated temperatures. See Example I of El-Nokaly wherein the liquid crystal is prepared.

In contrast, the present invention discloses a method for preparing a flavor or fragrance system encapsulated in a matrix incorporating hydroxypropyl cellulose, at the recited levels, with recited viscosity values, remains encapsulated at temperatures greater than about 130°C, which is far greater than a temperature of between 25°C to 45°C as disclosed in El-Nokaly. El-Nokaly does not teach or suggest hydroxypropyl cellulose of the recited levels with recited viscosity values in the present invention, which provides unexpected improved temperature profile

properties of the encapsulation materials (i.e., the flavor or fragrance material remains encapsulated at temperatures greater than about 130°C).

Applicants have cancelled claims 1-17 and added new Claims 18-36 directed to a method of manufacture a flavor or fragrance system wherein the flavor and fragrance material remains encapsulated in the matrix at temperatures greater than about 130°C. In view of these amendments to cancel claims 1-17, Applicant respectfully request withdrawal of the rejection.

Examiner continues to allege that Zerbe *et al.* anticipate the claimed invention under 35 USC 102(e) by teaching a composition comprising from about 20% to about 70% hydroxypropyl cellulose, from about 5% to about 70% modified starch, and up to about 60% of a flavor ingredient. (*See*, Office Action, page 3, line 25 to page 4, line 3)

It is the Examiner's opinion that the declaration filed on May 7, 2007 under 37 CFR 1.131 is ineffective because the evidence does not teach the carrier material of polyhydric alcohol and only teaches the carrier as a blend.

The Examiner did not respond to Applicants arguments presented in the previous office action on page 7, in which applicants presented the following arguments to overcome the Zerbe *et al.* reference. Applicant respectfully requests the Examiner to respond to Applicants following arguments:

Even *arguendo*, were Zerbe *et al.* an appropriate 102(e) reference, Zerbe *et al.* teach that "[A]n improved rapidly disintegrating flavored film . . . is comprised of a polymer base consisting of a mixture of hydroxypropyl cellulose and modified starch, a film-forming agent, and a flavor ingredient." (*See*, Zerbe *et al.*, col.3, lines 27-33) Zerbe *et al.* disclose "The flavored films of this invention may be prepared by mixing the hydroxypropyl cellulose, modified starch, flavoring and other ingredients in water to produce a solution . . . and dried to form a flavored film." (*See*, Zerbe *et al.*, col. 5, lines 36-40) Zerbe *et al.* neither teach nor suggest the claimed limitation of encapsulation. Accordingly, Applicants respectfully submit that the present invention is patentable over Zerbe *et al.*

The Examiner also alleges that Page 2, Section 2 and Page 4 Section 4 refer to attached sheets which were not received. Applicant attempted to contact the Examiner and left a voicemail message on the Examiner's USPTO voicemail on Monday October 15, 2007. Applicants respectfully request clarification of this point.

In view of the amendments canceling claims 1-17 Applicant respectfully request withdrawal of the rejection under 35 U.S.C. 102(e).

In view of the foregoing, Applicants respectfully request reconsideration, withdrawal of rejections, and allowance of all claims now present in the application.

The Commissioner is authorized to charge any required fees, including any extension and/or excess claim fees, any additional fees, or credit any overpayment to the Deposit Account No. 12-1295.

Respectfully submitted,

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